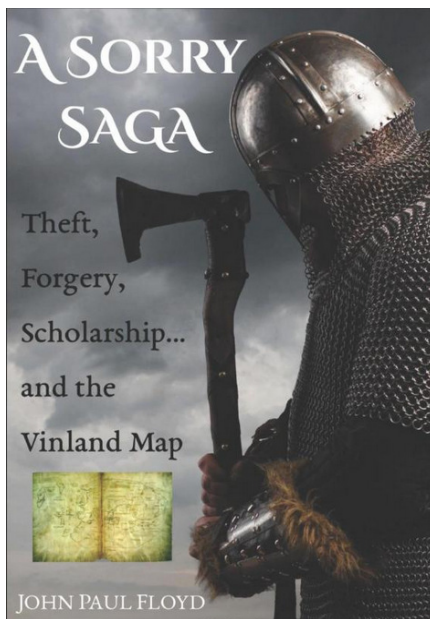


SAMPLE CHAPTER

A Sorry Saga



Also available as an eBook: [**https://www.amazon.com/dp/Bo7G8XQSYV**](https://www.amazon.com/dp/Bo7G8XQSYV)

John Paul Floyd

A Sorry Saga

Theft, Forgery, Scholarship... and the Vinland Map

INDEPENDENTLY PUBLISHED

© John Paul Floyd 2018. All rights reserved.

No portion of this publication may be reproduced, copied or transmitted save with written permission or in accordance with the provisions of the Copyright, Designs and Patents Act 1988, or under the terms of any licence permitting limited copying issued by the Copyright Licensing Agency.

The author has asserted his right to be identified as the author of this work in accordance with the Copyright, Designs and Patents Act 1988.

While all hyperlinks in this work have been validated immediately prior to publication, no guarantee can be given that these links will continue to operate, and no responsibility can be accepted for the changing content of external sites.

Cover image of Viking used under license from Shutterstock.com. The Vinland Map is the property of the Beinecke Rare Book and Manuscript Library, Yale University.

Contents

<i>Image sources and credits</i>	viii
<i>List of Illustrations</i>	ix
Preface	xiii
Introduction	3
1. The Making of a Mystery	7
Two Remarkable Dealers	7
Two Extraordinary Documents	10
Discussions at the Museum	15
On to Geneva	20
On American shores	22
2. The Missing Link	25
The <i>Speculum Historiale</i> volume	25
From Irving Davis to New Haven	28
Laurence Witten's dramatic discovery	32
A miracle... or not?	33
3. The Looting of La Seo	39
4. The Manuscripts of La Seo	49
Aftermath	49
The Greek Manuscripts of La Seo	49
Manuscripts from La Seo in other languages	58
The Latin Manuscripts of La Seo	61
5. The Books of La Seo	69
Yale University and the Books of La Seo	69
The British Museum and the Books of La Seo	70
Afterword to Chapter 5	95
6. Provenance Unknown	97
'A Private Collection in Europe'	97
From the library of Columbus?	103
From the library of President Perón?	106
A Castle in Moravia	107

7. The Innocence of Father Fischer	III
The Case against Luka Jelić	II3
Problems with patronymics	II6
The ‘companions’ Bjarni and Leifr	120
Bishop Eiríkr, Pope Pascal II and <i>Hungrvaka</i>	129
<i>Ultima Thule</i> , the Samoyeds, and Adam of Bremen	132
<i>Isolanda Ibernica</i>	139
<i>Dacia</i> for Denmark	140
Father Fischer’s ‘shaky knowledge’	141
The depiction of Vinland	143
The handwriting on the Vinland Map	150
Some closing remarks	159
8. Two Baffling Inscriptions	161
The Enigma of the ‘Third Part’ Inscription	161
The Problem of the So-Called ‘Map Title’ Inscription	164
9. The Pre-1957 Sources Unveiled	175
The Description of Don Cristóbal Pérez Pastor	175
As seen in Madrid: the <i>Exposición Histórico-Europea</i> , 1892–1893	187
10. A Closer Look at the New-found Sources	193
The Palencia Connection: A Phantom Link	193
Additional Gleanings from the <i>Catálogo General</i>	197
11. The Scientific Quest for Anachronism	203
Chronological Survey	204
Reflections on the Scientific Debate:	
The British Museum Research Laboratory study	222
The McCrone studies	226
The UC Davis PIXE study	242
The Brown and Clark Raman spectrographic study	246
The Harbottle paper and the response of Towe et al.	253
Conclusion	261
12. The Cartographical Quest for Anachronism	263
The Mercator World Map of 1569	263
The Maggiolo World Map of 1511	266
The Atlas of Angelo Freducci, 1556	272
A modern map of Asia in Diercke’s <i>Schul-Atlas</i>	274
<i>Elements of Map Projection</i> by Deetz and Adams	275
The Case of Greenland	281
Conclusion	283

13. A Cartographical Solution	285
The Vinland Map's dependence upon Formaleoni (1782):	
The Azores and the Madeira Islands	287
The Black Sea	289
The Sea of Marmara	289
Other features in the eastern Mediterranean region	290
The Mediterranean coastline west of the Nile	290
The Iberian Peninsula	291
The north coast of Denmark	291
Ireland, Britain and the facing coastline	291
Conclusion	305
 14. Journey's End	 307
 <i>APPENDIX A: Latin Manuscripts from Zaragoza</i>	
Cathedral Library presently at New Haven	311
 <i>APPENDIX B: Latin Manuscripts from Zaragoza</i>	
Cathedral Library presently at the University of Pennsylvania	323
 <i>Notes</i>	 327
<i>Bibliography</i>	407
<i>Index</i>	433

Image Sources and Credits

Figs. 1-6, 9, 11, 14, 20 (centre), 21 (left), 22 (left), 23 (top left; bottom left), 24 (bottom), 25 (centre), 26 (centre), 27 (left; right (various)), 29 (right), 30 (centre), 31, 36 (left), 39 (right), 40-47 (bottom image in each case): Beinecke Rare Book and Manuscript Library, Yale University.

Figs. 23 (bottom right), 24 (top), 25 (left), 26 (left), 36 (right), 38 (right), 39 (left), 40-47 (centre image in each case): courtesy of the John Carter Brown Library at Brown University.

Figs. 21 (right), 22 (right), 24 (centre), 25 (right), 26 (right), 30 (right), 37, 38 (left), 40-47 (top image in each case): with permission from the Ministero dei Beni e delle Attività Culturali e del Turismo—Biblioteca Nazionale Marciana, Venice. Reproduction prohibited.

Figs. 12-13, 15-16: Yale University Press (R.A. Skelton, Thomas E. Marston and George D. Painter, *The Vinland Map and the Tartar Relation: New Edition, with an introduction by George D. Painter and essays by Wilcomb E. Washburn, Thomas A. Cahill and Bruce H. Kusko, and Laurence C. Witten II* (New Haven, CT and London: Yale University Press, 1995)).

Fig. 8: Josef Fischer, *Die Entdeckungen der Normannen in Amerika. Unter besonderer Berücksichtigung der kartographischen Darstellungen* (Freiburg im Breisgau: Herdersche Verlagshandlung, 1902), Fig. 4 (borrowed from Gustav Storm, “Studies on the Vineland Voyages,” 338 (Fig. 3)).

Fig. 10: Gustav Storm, “Studies on the Vineland Voyages,” *Mémoires de la Société Royale des Antiquaires du Nord* n.s. 1884-1889 (1888): 340 (Fig. 4).

Fig. 17: Digital image, taken August 29, 2006, posted to Wikimedia Commons by Luis García (user “Zaqarbal”), September 20, 2006 (https://en.wikipedia.org/wiki/File:Plaza_de_Col%C3%B3n_%28Madrid%29_02.jpg) (accessed January 30, 2018). (My modified version of the image is distributed under the terms of the same licence: <https://creativecommons.org/licenses/by-sa/2.5/deed.en>).

Fig. 18: *Cuarto Centenario de Colon: Recuerdo de la Exposicion Histórico-Europea, Madrid 1892* (Madrid: Rubiños, Imp., 1892).

Figs. 19, 28, 35: E.G.R. Taylor, “The Vinland Map,” with an Editorial Note by M.W. Richey, *Journal of Navigation* 27 (1974): 195-204.

Fig. 20 (right): E.G.R. Taylor, “John Dee and the Map of North-East Asia,” *Imago Mundi* 12 (1955): 103-6.

Fig. 20 (left): Google Maps. Image © 2018 TerraMetrics.

Fig. 23 (top right): Armando Cortesão, “The North Atlantic Nautical Chart of 1424,” *Imago Mundi* 10 (1953): 1-13. The Pizzigano chart is owned by the James Ford Bell Library at the University of Minnesota, Minneapolis, USA.

Fig. 27 (right, second from top): Giuseppe Caraci, “The Italian Cartographers of the Benincasa and Freducci Families and the So-Called Borgiana Map of the Vatican Library,” *Imago Mundi* 10 (1953): 23-45. Mantua, Biblioteca Comunale MS. 636 is owned by the Biblioteca Teresiana, Mantua.

Figs. 29 (left), 30 (left): Carl Diercke and Eduard Gaebler, *Schul-Atlas über alle Teile der Erde* (Braunschweig: George Westermann, 1883) (multiple later editions).

Fig. 32: G.R. Crone, “The Vinland Map cartographically considered,” *Geographical Journal* 132 (1966): 76 (Fig. 1).

Fig. 33: Eila M.J. Campbell, “Verdict on the Vinland Map,” *Geographical Magazine* (April 1974), 307.

Fig. 34: Charles H. Deetz and Oscar S. Adams, *Elements of Map Projection with Applications to Map and Chart Construction* (Washington, DC: Government Printing Office, 1921), Plate IV.

Illustrations

Figures

1. Cover of volume containing the Vinland Map and Tartar Relation	II
2. The Vinland Map: recto of first leaf	II
3. The Vinland Map: verso of first leaf and recto of second leaf	II
4. The Tartar Relation: recto of first leaf	13
5. The <i>Speculum Historiale</i> : cover of volume	26
6. The <i>Speculum Historiale</i> : recto of first leaf	26
7. Beinecke MSS 350A and 350: the paths to Yale	37
8. Father Fischer's concept of the Norse experience of North America	146
9. Norse experience of North America as portrayed on the Vinland Map	146
10. Storm, "Studies on the Vineland Voyages," Fig. 4	149
11. The concluding words of Beinecke MS 350, fol. 239r	161
12. The inscription on the back of the Vinland Map	164
13. The so-called 'map title' inscription, excluding the word <i>delineacio</i>	170
14. The word <i>Bogirdao</i> in the Yale Tartar Relation (Beinecke MS 350A)	182
15. The original form of the so-called 'map title' inscription	183
16. Front and back views of the so-called 'map title' inscription	184
17. Modern view of the exterior of the Biblioteca Nacional de España, Madrid (formerly Palacio de la Biblioteca y Museos Nacionales)	191
18. Interior of Sala X during the <i>Exposición Histórico-Europea</i> , 1892 to 1893	191
19. Diagram by E.G.R. Taylor showing the positioning on three maps of Shetland and the Faroe Islands relative to Iceland and Ireland	265
20. Images corresponding to E.G.R. Taylor's tracings in Fig. 19	265
21. Section of the Vinland Map alongside section of the 1436 circular world map of Andrea Bianco	265
22. The West African coastline as it appears on the Vinland Map and on the 1436 circular world map of Andrea Bianco	268
23. The inspiration for the Vinland Map's depiction of the West African coastline, according to E.G.R. Taylor	268

24. The continent of Africa on the 1511 world map of Vesconte Maggiolo, the 1436 circular world map of Bianco, and the Vinland Map	269
25. Peninsulas on the 1511 world map of Maggiolo and on the Vinland Map, and an island on the 1436 circular world map of Bianco	271
26. Black Sea and the Sea of Marmara on the 1511 world map of Maggiolo, the Vinland Map and the 1436 circular world map of Bianco	271
27. Supposed dependence of eastern islands of the Vinland Map upon Cuba and San Domingo, as depicted in the 1556 Atlas of Angelo Freducci	273
28. Diagram by E.G.R. Taylor deriving the Vinland Map's east Asian coastline from a 'unit' in Diercke's modern <i>Schul-Atlas</i>	276
29. Section of map of Asia in Diercke's <i>Schul-Atlas</i> , with Taylor's 'unit' marked, and section of Vinland Map showing east Asian coastline	276
30. Southwest Britain and Breton peninsula in Diercke's <i>Schul-Atlas</i> , the Vinland Map and the 1436 circular world map of Bianco	276
31. Reconstruction of E.G.R. Taylor's ellipse, based upon her original overlay tracing	278
32. G.R. Crone's ellipse	278
33. Eila M.J. Campbell's ellipse	278
34. Plate IV of <i>Elements of Map Projection</i> by Deetz and Adams	282
35. Diagram by E.G.R. Taylor showing supposed derivation of <i>Vinilanda Insula</i> from Plate IV of Deetz and Adams	282
36. Atlantic region, as depicted on the Vinland Map and on the circular world map of Bianco (1436) (as engraved for Formaleoni, 1782)	293
37. Azores and Madeira group, as depicted on the fourth chart of the atlas of Bianco (1436) and on Bianco's circular world map	294
38. Azores and Madeira group, as depicted on the circular world map of Bianco (1436) and on the engraving of Formaleoni (1782)	295
39. Azores and Madeira group, as depicted on the engraving of Formaleoni (1782) and on the Vinland Map	296
40. Black Sea, as depicted on the circular world map of Bianco (1436), on the engraving of Formaleoni (1782) and on the Vinland Map	297
41. Aegean and the Sea of Marmara, as depicted on the circular world map of Bianco (1436), on the engraving of Formaleoni (1782) and on the Vinland Map	298

42. Sea of Marmara, as depicted on the circular world map of Bianco (1436), on the engraving of Formaleoni (1782) and on the Vinland Map	299
43. The Peloponnese and a segment of the Turkish coastline, as depicted on the circular world map of Bianco (1436), on the engraving of Formaleoni (1782) and on the Vinland Map	300
44. Mediterranean coastline west of the Nile, as depicted on the circular world map of Bianco (1436), on the engraving of Formaleoni (1782) and on the Vinland Map	301
45. Iberian Peninsula, as depicted on the circular world map of Bianco (1436), on the engraving of Formaleoni (1782) and on the Vinland Map	302
46. Northern coast of Denmark, as depicted on the circular world map of Bianco (1436), on the engraving of Formaleoni (1782) and on the Vinland Map	303
47. Ireland, Britain and the continental coastline, as depicted on the circular world map of Bianco (1436), on the engraving of Formaleoni (1782) and on the Vinland Map	304

Tables

1. Handwriting comparison (I): selected phrases from the Vinland Map (VM) and Tartar Relation (TR)	152
2. Handwriting comparison (II): selected capital letters from the Vinland Map (VM) and Tartar Relation (TR)	158
3. Physical features of the Pérez Pastor manuscript and Beinecke MSS 350/350A compared	179
4. Comparison of selected sample descriptions in the 1974 McCrone report with McCrone's description of the same samples in 1988	234

Preface

I cannot quite believe that I have written a book about a map. It all began seven years ago, when I casually pulled a book off a shelf. Back in the spring of 2011, I stood idly browsing the stacks of a local university library for something interesting to read. My eyes happened to fall upon a slim published volume of papers presented at the “Vinland Map Conference” held in 1966. At that time I was only vaguely conscious of the existence of the Vinland Map, although I had heard of it, and had some idea that it had been discredited as a forgery. The detailed level of technical discussion in the book surprised me. It was clear that, forgery or not, a good number of reputable scholars had once taken the map quite seriously.

Delving further into the subject online, I was intrigued to learn that neither the map itself, nor the genuine medieval manuscripts with which it had been bound, had any documented history prior to their appearance on the international book market in 1957. Now, it seemed to me that, even if the map itself were a forgery, some trace of the other documents might have been left on the historical record. From what I had read, one of the associated documents, the Tartar Relation, was a very scarce text; its medieval author, Friar C. de Bridia, was unknown in any other connection. So I typed the search term “C. de Bridia” into Google Books, to see if the name had appeared anywhere in print prior to 1957. After sorting the results in chronological order, I was startled to discover that the search had brought up references to “C. de Bridia” in two nineteenth-century publications.

With just a few minutes on a keyboard and a few clicks of a mouse, I had stumbled upon new—and potentially exciting—information about the case. That evening, as far as I could tell, I was the only person in the world aware of these pre-1957 references to the medieval friar. These references, I knew, could hold the key to resolving the mystery surrounding the provenance of the Vinland Map documents.

A second discovery followed within a few days. After several hours of study, I made a finding that all previous researchers, in five decades of controversy over the map, had somehow overlooked. The Vinland Map is known to share certain key features with a genuine medieval map: the circular world map of Andrea Bianco, dating from 1436. This dependence has long been recognised. What no-one had previously realised is that the Vinland Map was not in fact copied directly from the 1436 Bianco world map. Instead, the forger was unwise enough to take an eighteenth-century engraving of the Bianco map as his template. The engraving departs from the original in a number of respects, and since the Vinland Map replicates these errors, it cannot possibly be a genuine medieval

artifact. The importance of this finding rests not so much in the fact that it discredits the Vinland Map—for the majority of scholars, the map is already discredited on other grounds—but rather in the troubling question that it raises. How could such a glaringly obvious objection to the map's authenticity have passed unnoticed by the experts in fifty years of impassioned debate?

Another flash of realisation involved the purported medieval inscription on the back of the map, which had puzzled researchers for decades. Suspicions had been voiced over the first word, *delineacio*, which appeared to indicate the presence of some sort of drawing overleaf (presumably the map); but excising that word on its own simply could not be made to yield a meaningful inscription. It struck me that the line would make perfect sense if, in addition to *delineacio*, a couple of words which follow could also be excluded. Reaching for a copy of the Yale study, I found the photograph of the inscription, and it was obvious within seconds that I had uncovered the forger's precise tactic. Spurious words had indeed been added to a genuine medieval inscription in order to obliterate its original (and very mundane) meaning. It is actually possible to see this simply by turning the page with the reproduction in the Yale book: the genuine portion of the inscription shows through in reverse, at the top left of the map; the forged portion is barely visible. To have an insight visually confirmed in this way was very satisfying, particularly since the source of the insight was one of the descriptions written prior to 1957. It meant that the writer of the description must have seen the inscription in its original form, *before it was altered*; which means, in turn, that he must have set eyes upon the very piece of parchment on which the map now appears. And this is of considerable significance, since he did not mention the presence of a map.

From one of the newly-discovered nineteenth-century sources it became clear that the two medieval documents associated today with the Vinland Map were once in the possession of Zaragoza Cathedral Library. This led me to investigate an extensive series of thefts from that institution which took place in the 1950s. Researchers have long been aware of the fact that the Vinland Map trail leads back to a dealer in antiquarian books named Enzo Ferrajoli, and that Ferrajoli was convicted of stealing books from Zaragoza. The extent of the scandal, however, has not always been recognised, and its central significance to the story is often overlooked. I am the first author to have utilised the British Museum file on the thefts, and in this book I identify, for the first time, the Zaragozan provenance of a number of items in institutional collections. I have ventured to trespass upon the domain of experts in attempting to untangle the threads of this dismal affair.

There is a considerable amount of detailed analysis in the pages which follow, much of it new. (For example, my book contains the first detailed critique of the late E.G.R. Taylor's trenchant views on the Vinland Map.) While I have made every effort to be as accurate and clear as possible, I cannot pretend that the material always makes for exciting reading. If readers feel that the codicological,

scientific and geographical discussion becomes too arcane in places, I can only plead in excuse that the thicket of complexity which has grown up around the topic is not of my making. The issues raised deserve a leisurely dissection, and they receive it here.

There are many people who could have vastly improved and enriched this book with their assistance and advice, and who doubtless would have done so generously, if asked. However, I made a conscious decision at an early stage not to seek the guidance of professionals in any of the fields covered by the study. The reason is simple: I am not an academic, and I do not pretend that my book is a piece of academic scholarship. It is the work of an amateur researcher, and I have thought it appropriate, for better or worse, to keep it that way. I also wished to avoid becoming overly identified with one side of the acrimonious partisan debate over the map's authenticity. While my findings support the position of those who have maintained over the years that the map is not authentic, I wanted to be free to criticise instances of dubious argumentation on either side.

In line with standard practice, the bibliography of the present study lists works referred to in the main text and endnotes. Many of these works make no direct reference to the Vinland Map. Conversely, a good number of books and articles which feature the map have not found their way into the bibliography. Readers who would like to have a dedicated Vinland Map reading list should consult Leon Koczy, "The Vinland Map," *Antemurale* 14 (1970): 163–70; Wilcomb E. Washburn, ed., *Proceedings of the Vinland Map Conference* (Chicago, IL: University of Chicago Press for the Newberry Library, 1971), 155–81, and Sandra J. Lamprecht, comp., "The Vinland Map: A Comprehensive, Annotated Bibliography of Works in English, 1965–2000," *Pre-Columbiana: A Journal of Long-Distance Contacts* 2(1) (June 2000): 57–84.

Despite the vast number of references to the map in books and periodical literature, the Vinland Map has given rise to only one full-length scholarly work. Kirsten A. Seaver's treatment of the subject in *Maps, Myths and Men: The Story of the Vinland Map* (Stanford, CA: Stanford University Press, 2004), in particular her claim to have identified the forger, has dominated the field for over a decade. Since I have found it necessary to dissent from a number of Kirsten Seaver's conclusions, I would like to place on record here my appreciation of the careful scholarship in constant evidence in *Maps, Myths and Men*. I believe there are few people in the world who could honestly claim, after reading it, that they had learned nothing.

As I write these lines (June 2018), there is evidence of renewed interest in the Vinland Map. The map has just gone on display at a special exhibition at Mystic Seaport Museum, Connecticut. Fresh non-destructive scientific tests have been conducted by Yale's Institute for the Preservation of Cultural Heritage, and a new book on the map is said to be in preparation (Mike Cummings, "Yale putting high-tech tests to its controversial Vinland Map," *YaleNews* website, February 28, 2018).

In another recent development (March 2018), a copy of an unpublished 2014 report to the Beinecke Library has been placed online by its authors. The report describes technological efforts to improve the legibility of handwritten text on a blank free endpaper of the binding used to cover the Vinland Map and Tartar Relation manuscripts; the purpose of making it available to a wider audience was to “solicit ideas on further enhancement” of the text. This should no longer be necessary, since I have been able to identify the text in question (for more information, see Chapter I, note 29, below). I am glad to have been in a position to make this additional contribution to Vinland Map research just as the present book neared completion.

My grateful thanks are due to the staff at the Map Department of the British Library for making available their extensive collection of archival material relating to the Vinland Map; in particular to Nicola Beech for her helpful willingness to retrieve stacks of boxes from the store at short notice. I am glad to have had an opportunity to meet with Peter Barber shortly before his retirement as Head of Map Collections at the British Library, and to discuss his own recent investigation into the possible identification of the forger (see the concluding chapter of this book). At the British Library Corporate Archive, Lynn Young and, more recently, Katie Espley, most kindly identified and facilitated access to a number of British Museum and British Library files relevant to the Zaragoza affair.

The British Museum itself retains some files on the Vinland Map and I appreciate having been afforded the opportunity to consult this material. It was a pleasure to meet with Paul Craddock at the British Museum on the occasion of my visit. Mr Craddock was present when the map was subjected to scientific examination at the museum in 1967, and has lately discussed the topic in his book, *Scientific Investigation of Copies, Fakes and Forgeries* (Oxford; Burlington, MA: Elsevier/Butterworth-Heinemann, 2009).

I am indebted to the National Library of Scotland, the National Library of Wales, Aberdeen University Library, Aberdeen Central Library, the V&A’s National Art Library and the Caird Library and Archive at the National Maritime Museum, Greenwich, for the opportunity to consult various works.

Special thanks are due to Nicholas Hellen of the *Sunday Times*, for his concise and coherent article about my findings (“Amateur scuppers ‘Viking map of US’,” *Sunday Times* (London), June 2, 2013, p. 6). Shortly after this article was published, I was honoured to be invited to Copenhagen to give a talk on the Vinland Map at a regular monthly meeting of the Royal Nordic Society of Antiquaries (*Det Kongelige Nordiske Oldskriftselskab*). Meeting the Vice-President of the Society, Niels-Knud Liebgott, and his wife was a truly pleasant experience. I am particularly grateful to *Det Kongelige Nordiske Oldskriftselskab* for its generous financial gesture.

I am grateful to Jørgen D. Siemonsen for co-ordinating my visit to Copenhagen, and for arranging for me to speak with Danish journalist Jens

Ejsing about my discoveries. I would like to thank Mr Ejsing for the resulting article (“Verdenskortets hemmelighed,” *Berlingske* (Copenhagen), 2. Sektion (Magasin), November 10, 2013, pp. 6–7). I am also pleased to have had an opportunity to meet William W. Fitzhugh of the Smithsonian Institution, and appreciate his kind words of encouragement (and those of Mr Siemonsen) with regard to my book.

Last but certainly not least, I would like to thank my family and especially my mother, without whom this book (and much else) would not have been possible.

And now, let the saga begin!



A Sorry Saga

CHAPTER THIRTEEN

A Cartographical Solution

This chapter presents an entirely new cartographical argument which, to my mind, definitively settles the question of the authenticity of the Vinland Map. The map can be shown to be dependent upon an eighteenth-century engraving of Andrea Bianco's circular world map of 1436; an engraving which differs in a number of respects from Bianco's original. It follows that the Vinland Map cannot be a medieval artifact.

The relevant engraving dates from 1782 and bears the title: *Planisferio Antico di Andrea Bianco: Che si conserva in Venezia nella Biblioteca S. Marco*. It is the work of Vincenzio Antonio Formaleoni (1752-1797). Formaleoni was born in Fiorenzuola (in Piacenza) and ended his days in a Mantuan prison. He had an unconventional and eventful career, aspects of which remain obscure to this day. At one time an aspiring cleric, ordained to minor orders, he turned to a life of travel, visiting Egypt and other far-flung lands. The year 1775 found him in Venice, where his position at a printing firm left him time to pursue his interests in the fields of geography and cartography. Although largely self-taught, Formaleoni's application to his chosen studies was such that he acquired a degree of real expertise. He authored a number of specialised studies in topography and hydrography, as well as some historical romances; his activity as an editor was also noteworthy.¹

Formaleoni's passionate enthusiasm for Venice was coupled with a tendency to laud Venetian achievements to the point of exaggeration. He was nevertheless compelled to abandon the city in 1792 because of the reaction of the authorities to one of his books: an elegy, of all things, in praise of a recently-deceased local dog (it was really a parody of a pompous sermon that had been preached at the obsequies of a Venetian Admiral). The episode was not the sole cause of his expulsion, however, since it was not the first time that Formaleoni's hot-headed insubordination had landed him in trouble.²

Arriving in Paris, he wrote to the authorities in Venice, lamenting the harshness and injustice of his banishment and offering his services; his offer was accepted, and it was agreed that he should report back any news of potential value to the Republic. Thus Formaleoni developed contacts within revolutionary circles in France, among them Jean-Paul Marat. Despite playing up his radical credentials, he fell under suspicion and was jailed by the French in 1793; by 1794 he was free, and living in Genoa. By this time he had gained the reputation of being an unreliable, self-important adventurer whose true allegiances were in

doubt. As the result of a complex series of events he was arrested by the Austrians and ended up in a prison in Mantua, where he contracted an illness and died in 1797.³

From the viewpoint of our present study, the most important episode in Vincenzo Formaleoni's multi-faceted career was his decision to have an engraving made of Andrea Bianco's 1436 circular world map. While in Venice, Formaleoni had made a study of a certain medieval writer, but had been frustrated by a number of obscure geographical references in that writer's texts. He mentioned his predicament to the Abate Morelli, conservator of the Biblioteca di San Marco (the present-day Biblioteca Nazionale Marciana). To Formaleoni's amazement, Morelli produced the atlas of Andrea Bianco for reference. Marvelling at this unsuspected treasure, Formaleoni turned his attention to a study of Bianco's cartography. He obtained permission from Morelli to have engravings made of the circular world map and of one other chart from the atlas depicting islands in the Atlantic. (Formaleoni incautiously took Bianco's *Antillia* to be one of the present-day Antilles, hailing this as proof that the latter islands had been discovered before Columbus).

Formaleoni's essay on the subject was entitled *Antiche scoperte*, and it appeared in the sixth tome of his edition of Jean-François de La Harpe's multi-volume *Compendio della storia generale de' viaggi*, published in 1782.⁴ The following year, Formaleoni published a separate study entitled *Saggio sulla nautica antica de' Veneziani*. At the conclusion of this 1783 publication he appended a slightly extended version of the 1782 essay, with its reproductions of the Atlantic chart and of Bianco's world map, under the new title *Illustrazione di due carte antiche delle Biblioteca di S. Marco*.⁵

Formaleoni's engraving of the world map obtained a wider circulation in the 1840s through its inclusion in a famous *Atlas* of historical maps published by the Visconde de Santarém.⁶ Further reproductions of the 1782 engraving followed, most notably in the influential 1898 book of A.E. Nordenskiöld, *Periplus*.⁷ Even the appearance in 1871 of a near full-scale photographic facsimile of Bianco's entire atlas did not supplant the use of the Formaleoni engraving.⁸ Not only was the facsimile edition produced in very small numbers, destined for the shelves of a few major libraries; its photographic images could not compete with Formaleoni's elegant reproduction in terms of immediate clarity.⁹

Photography did not, of course, exist in Formaleoni's day: all eighteenth-century reproductions of early maps were ultimately hand redrawings and, as such, liable to contain mistakes.¹⁰ Overall, the Formaleoni engraving represents a commendably accurate copy of the 1436 circular world map of Andrea Bianco: only in a relatively few places does it depart from its model. These deviations are, however, fatal for the authenticity of the Vinland Map. In not one place where the 1782 engraving deviates from Bianco does the Vinland Map follow Bianco in preference to Formaleoni; in several instances the visual evidence is so strong as to place the fact of dependence beyond doubt.

The Azores and the Madeira Islands

If Vinland, Greenland and Iceland are left out of consideration then the portrayal of the mid-Atlantic isles in the Vinland Map has much in common with the depiction of the same islands in the circular world map of Andrea Bianco (cf. Figure 36 below). The resemblance extends to the form of the two large islands which feature at the western extremity of Bianco's world map: these are the non-existent islands of Antillia and Satanaxes, which have long intrigued students of fifteenth-century cartography, although the Vinland Map provides its own unique name for them: *Magnæ Insulæ Beati Brandani Branziliæ dictæ* ("the Great Isles of Blessed Brandan, called the Branzilians").¹¹

Our interest here, however, does not lie in the Vinland Map's "Branzilians"; nor does it lie in the two small islands situated, respectively, to the west of Ireland and to the southwest of England in the Vinland Map, which also feature in Bianco and in other medieval maps. Instead, we propose to focus upon the Vinland Map's depiction of the Azores and the Madeira group.¹² The Vinland Map bestows another cartographically-unique collective name upon these islands: *Desiderate insule* (the "desired," or "longed-for" isles).¹³ In *The Vinland Map and the Tartar Relation*, R.A. Skelton made the following observation:

Further out, and extending north-south . . . Bianco's world map shows a chain of about a dozen small islands, drawn in conventional portolan style. These islands—the Azores of fifteenth-century cartography and the Madeira group—are represented in the Vinland Map, in more generalized form and without Bianco's characteristic geometrical outlines, by seven islands, having the same orientation and relative position as in Bianco's map, with the name *Desiderate insule*.¹⁴

According to Skelton, the seven small Atlantic islands labelled *Desiderate insule* on the Vinland Map correspond to "a chain of about a dozen small islands" in Bianco's world map.

Skelton's remarks, on first reading, struck me as puzzling. Working from a representation of Bianco's map which I had no reason at the time to consider inaccurate, I could not understand why the English scholar seemed to think there was a discrepancy. As far as I could see, Bianco did not depict "about a dozen" small islands in this chain at all, but rather seven: just as in the Vinland Map.

The breakthrough only came some time later, when it first occurred to me that the copy of Bianco's map that I was relying on might not be an entirely faithful reflection of the 1436 original. Skelton's remarks, as it turned out, were perfectly correct, based as they were on a study of the original map in Venice. I had unthinkingly placed my trust in the accuracy of Formaleoni's reproduction,

not realising that the engraving reduces the number of small islands in the Azores and Madeira group from “about a dozen” to just seven.

Although Bianco left the islands unnamed on his world map, they are not scattered at random: they follow a traditional pattern established by his cartographical predecessors. A side-by-side comparison with the more detailed fourth chart of his atlas enables the individual islands to be identified (Figure 37). Bianco’s nomenclature is given below (in the case of the Madeira group, the present-day names of the islands are provided, in brackets):

The Azores

- 1) *corbo marinos*
- 2) *coruos*
- 3) *ya de sanzorzi*
- 4) *ya de bentusta*
- 5) *ya de brasil*
- 6) *ya de colonbi*
- 7) *chapusa*
- 8) *lobos*

The Madeira group

- 9) *porto santo* [Porto Santo]
- 10) *ya de maderia* [Madeira]
- 11) *ya dexerta* [Ilhas Desertas]

Having assigned these names, it is a straightforward matter to compare the islands as they appear in Bianco’s world map with their reproduction in Vincenzo Formaleoni’s 1782 engraving (Figure 38). It is clear that Formaleoni was somewhat careless when it came to copying this group of islands, for his reproduction of Bianco’s map diverges from the original in several ways.¹⁵ Specifically, Formaleoni’s engraving:

- (i) omits *coruos* in the Azores;
- (ii) omits *porto santo* in the Madeira group;
- (iii) omits *ya dexerta* in the Madeira group.

It is striking to note that *in each of these respects* the Vinland Map’s depiction of the Azores and the Madeira group agrees with Formaleoni’s 1782 redrawn version, as against Bianco’s 1436 original (see Figure 39).

The Vinland Map’s use of a single island to represent the entire Madeiran archipelago would be an unexpected feature in a genuine map of the 1440s. The failure of R.A. Skelton to specifically address this point is surprising, given his

comment elsewhere in his essay that the “Madeira group, perhaps also sighted in 1336, was delineated in the Laurentian sea-atlas (1351) and in all subsequent maps; Portuguese settlement there began in 1418.”¹⁶ In other words, the Madeira group was already familiar to cartographers by 1440: the date around which the Vinland Map is supposed to have been drawn. It was known to consist of multiple islands, and that is how it was regularly depicted from the second half of the fourteenth century onwards. In depicting the Madeira group as a single island, the Vinland Map diverges not only from Andrea Bianco’s atlas, but also from other surviving maps of the period.

It might be objected that the Vinland Map differs from Formaleoni’s engraving, in that the former omits Bianco’s S-shaped *yl de bentusta*, whereas the latter does not. However, in this connection it should be noted that the later reproductions of Formaleoni’s engraving which appear in the famous compilations of the Visconde de Santarém and Nordenskiöld also omit *yl de bentusta*; its unconventional shape may have led to it being mistaken for a scratch on the plate.

If the Vinland Map’s depiction of the Azores and the Madeira group were the only factor linking it to Formaleoni’s reproduction, it could perhaps be put down to coincidence. After all, Formaleoni’s engraving does not explain the Vinland Map’s departure from Bianco in a number of other areas: e.g. as regards the layout of the Canary Islands (which are shown grouped together in the Vinland Map, in contrast to Bianco’s straight-line depiction) or the island groups of the Indian Ocean (whose crude depiction in the Vinland Map differs markedly from Bianco’s meticulous arrangement). Needless to say, Formaleoni’s engraving does not show Vinland, Greenland or Iceland; it does not eliminate a large section of the eastern landmass in order to make room for a “Great Sea of the Tartars” and Japan; nor does it provide an explanation for the Vinland Map’s eccentric hydrography. In all of these respects, the Vinland Map deviates from Formaleoni just as much as it deviates from Bianco. Other features of the Vinland Map, however, strongly support the conclusion that Formaleoni’s 1782 engraving was used in its construction.

The Black Sea

The Black Sea appears in the Vinland Map with a curious double-pronged projection on its southern border. This distinctive projection is not present on Andrea Bianco’s original world map; it does feature, however, in Vincenzo Formaleoni’s 1782 engraving (see Figure 40).

The Sea of Marmara

In Bianco’s world map, the Sea of Marmara is clearly distinct from the Aegean; in the Vinland Map it appears as a peculiar thin, straggling strip of water (see Figure

41). The decidedly unusual treatment which the Sea of Marmara receives in the Vinland Map has given rise to some comment.¹⁷

Only when the depictions are compared does it become clear what has really happened here. Andrea Bianco drew a perfectly distinct Sea of Marmara, but he partly overlaid it with a decorative icon that he positioned nearby.¹⁸ In the original map the icon does not obscure the underlying sea area, which remains clearly visible. In Vincenzo Formaleoni's engraving, however, Bianco's icons effectively become solid, non-transparent blocks; they cover up any features on which they happen to be placed. Thus the overlaid portion of the Sea of Marmara which remains visible on the original map is completely obliterated in the Formaleoni reproduction (see Figure 42).

The creator of the Vinland Map evidently fell into the trap of thinking that the strip of water visible in the Formaleoni engraving represented a medieval cartographer's depiction of the entire Sea of Marmara.

Other features in the eastern Mediterranean region

The Gulf of Kyparissia—an indentation along the western coast of Greece's Peloponnese peninsula—is portrayed less prominently in Bianco's world map than in Formaleoni's copy (even taking into account the fact that the green of the sea slightly overlaps the land border in the 1436 map). The Vinland Map deviates from Bianco's world map in the same respect (see Figure 43). It should be said, however, that in two of the smaller-scale charts in Bianco's own atlas (the second and the seventh) the geographical feature appears more clearly than in the world map.

Note also the two southernmost peninsulas shown by Bianco on the Turkish coast. In Bianco they are virtually parallel, whereas in Formaleoni—and in the Vinland Map—they are splayed apart.

The Mediterranean coastline west of the Nile

This is an interesting example, since the small discrepancy which exists between the Vinland Map and Bianco's world map in this region has already been noticed by one insightful British researcher. In his 2004 study of the Vinland Map, David J. Bradbury drew attention to the presence of a promontory in this area which has no counterpart in the Bianco world map of 1436.

The added promontory lines up with an odd piece of careless artwork on the Bianco map, where both the scalloped line depicting the coast and the blue-green color of the sea have been smudged into a pale patch . . .¹⁹

It is now evident that the promontory in question made its first appearance in the 1782 engraving of Vincenzo Formaleoni (see Figure 44).

The Iberian Peninsula

As noted by R.A. Skelton, there are certain differences between the Vinland Map's depiction of the Iberian Peninsula and the manner in which it was drawn by Andrea Bianco:

The outline of Spain is depicted [on the Vinland Map] with slight variation from Bianco's, the Atlantic coast trending NNW (instead of northerly) and the north coast being a little more arched.²⁰

The engraving of Vincenzo Formaleoni supplies an explanation for these discrepancies (see Figure 45). Both Bianco and Formaleoni show an indentation on the more northerly part of the Atlantic coastline. In Bianco's original map, the distinction between the green-coloured sea and the land is immediately obvious. In Formaleoni's copy, however, the water within the indented region is more darkly shaded than the surrounding ocean. A person unfamiliar with Bianco's original and relying solely upon Formaleoni could easily have misinterpreted the darker area as representing some sort of land-based icon—a citadel, for instance—instead of water. This would account for “the Atlantic coast trending NNW (instead of northerly).”

As regards the “arched” character of the northern coast in the Vinland Map, it will be seen that the curvature is significantly accentuated in Formaleoni's engraving.

Skelton overlooked one further aspect in which the Vinland Map deviates from Bianco: namely, the angle of the Strait of Gibraltar. In Bianco's world map the Strait has a definite ENE orientation. This directional feature is considerably less marked in Formaleoni's version, and in this respect, too, the Vinland Map reflects Formaleoni's copy, rather than Bianco's original.

The north coast of Denmark

Relatively flat in Bianco's original world map, the northern coast of Denmark in Formaleoni's engraving develops a convex cusp, with the addition of a small offshoot of land at the eastern end. Here, Formaleoni's slight changes result in a rather better approximation to the real geography of the region (the offshoot being the peninsula known as Skagen Odde). The Vinland Map makes the same minor “improvements” to Bianco (see Figure 46).²¹

Ireland, Britain and the facing coastline of continental Europe

(i) Bianco depicts a deep inlet in the southern coast of Ireland, penetrating almost halfway into the island. In Formaleoni's engraving, the depth of the inlet is greatly reduced. The Vinland Map follows Formaleoni's depiction, not Bianco's (see Figure 47).

(ii) Bianco's map and Formaleoni's engraving differ in their placement of the small mythical island west of Ireland (identified as *y^e de berzil* in the fifth chart of Bianco's atlas). Formaleoni positions the island just south of the inlet on the western coast of Ireland, whereas Bianco has the island situated just north of the inlet. The Vinland Map copies Formaleoni's southward displacement.

(iii) In his circular world map, as well as in the fifth, sixth and seventh charts of his atlas, Bianco places an island off the east coast of Scotland. As Skelton notes, this mythical island corresponds to "the *Tile* of fourteenth-century cartography," and it is expressly identified as such in the sixth chart of Bianco's atlas ("*tile est locus inhabitabilis . . .*").²² Yet Skelton fails to remark upon the singular fact that Bianco's island is attached to the Scottish mainland in the Vinland Map. Formaleoni's 1782 engraving provides a likely explanation for this curiosity. Although Formaleoni did actually follow Bianco in depicting *Tile* as an island, this is by no means immediately obvious from his black-and-white reproduction. It is easy to see how someone whose knowledge of Bianco's world map derived exclusively from Formaleoni's copy could have mistaken the island for part of the Scottish coastline.

(iv) In Bianco's world map, the portion of European coastline directly facing England has a NNE trend. In Formaleoni's copy, the same portion of coast has a NNW trend. The Vinland Map departs from Bianco in the same manner.²³

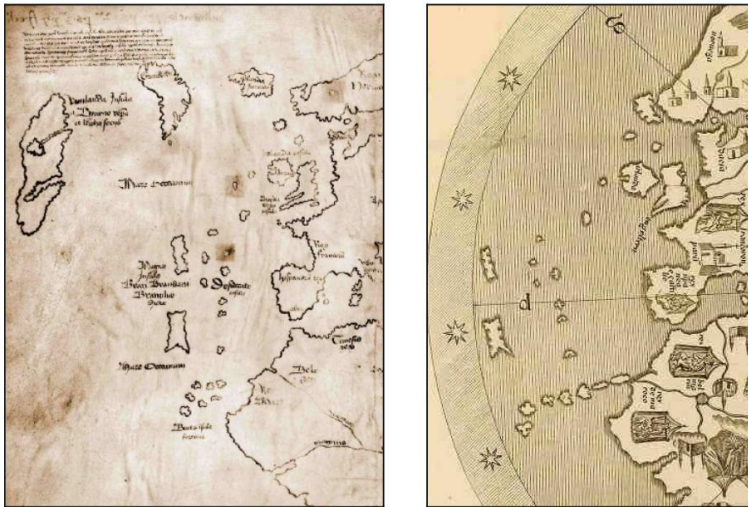


FIGURE 36. ATLANTIC REGION, AS DEPICTED (LEFT) ON THE VINLAND MAP, AND (RIGHT) ON VINCENZIO FORMALEONI'S 1782 ENGRAVING OF THE 1436 CIRCULAR WORLD MAP OF ANDREA BIANCO. (NOTE THAT TWO WORMHOLES ARE PRESENT IN THE OCEAN AREA OF THE VINLAND MAP, WHICH SHOULD NOT BE MISTAKEN FOR ISLANDS. THEY ARE PATCHED ON THE REVERSE OF THE MAP, AND HENCE ARE SURROUNDED BY DARK SQUARES ON THE IMAGE)

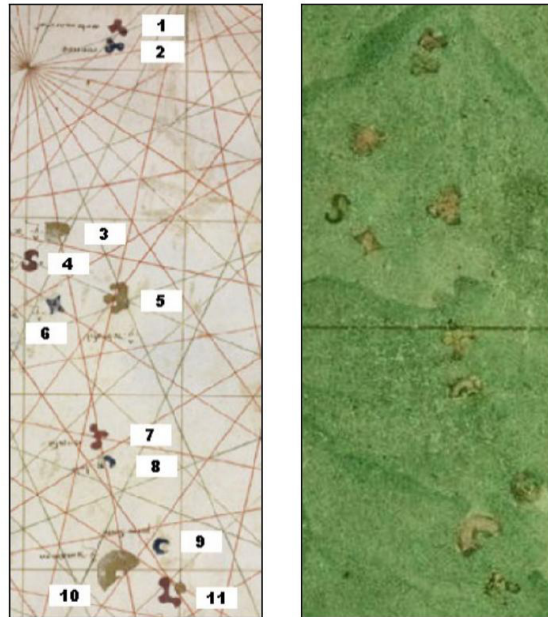


FIGURE 37. LEFT, THE AZORES AND MADEIRA GROUP, AS DEPICTED ON THE FOURTH CHART OF THE ATLAS OF ANDREA BIANCO (1436) (WITH NUMERICAL LABELS ADDED).
 RIGHT, THE SAME ISLANDS, AS DEPICTED ON THE CIRCULAR WORLD MAP ON
 BIANCO'S ATLAS



FIGURE 38. LEFT, THE AZORES AND MADEIRA GROUP, AS THEY APPEAR ON THE CIRCULAR WORLD MAP OF ANDREA BIANCO (1436). RIGHT, THE SAME ISLANDS, AS DEPICTED ON THE 1782 ENGRAVING OF VINCENZIO FORMALEONI. NOTE THE DISAPPEARANCE OF *CORUOS* IN THE AZORES, AND OF *PORTO SANTO* AND *Y^a DEXERTA* IN THE MADEIRA GROUP (AS INDICATED BY THE ARROWS)

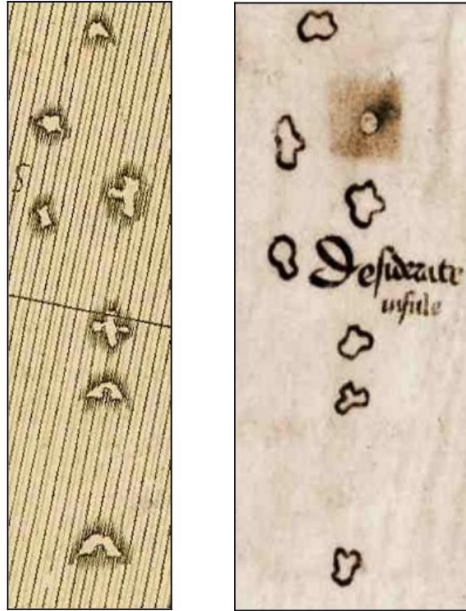


FIGURE 39. LEFT, THE AZORES AND MADEIRA GROUP, AS THEY APPEAR ON FORMALEONI'S 1782 ENGRAVING. RIGHT, THE SAME ISLANDS, AS DEPICTED ON THE VINLAND MAP. THE VINLAND MAP AGREES WITH FORMALEONI IN OMITTING *CORUOS*, *PORTO SANTO* AND *Y^a DEXERTA*. (NOTE THAT THE CIRCLE SURROUNDED BY A DARK SQUARE ON THE VINLAND MAP IS A WORMHOLE; THE SQUARE IS THE IMAGE OF A PATCH SHOWING THROUGH FROM THE OTHER SIDE OF THE MAP)

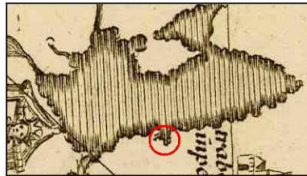


FIGURE 40. THE BLACK SEA, AS DEPICTED ON THE 1436 CIRCULAR WORLD MAP OF ANDREA BIANCO (1436) (TOP), ON THE ENGRAVING OF VINCENZIO FORMALEONI (1782) (CENTRE) AND ON THE VINLAND MAP (BOTTOM)



FIGURE 41. THE AEGEAN AND THE SEA OF MARMARA, AS DEPICTED ON THE 1436 CIRCULAR WORLD MAP OF ANDREA BIANCO (1436) (TOP), ON THE ENGRAVING OF VINCENZIO FORMALEONI (1782) (CENTRE) AND ON THE VINLAND MAP (BOTTOM)

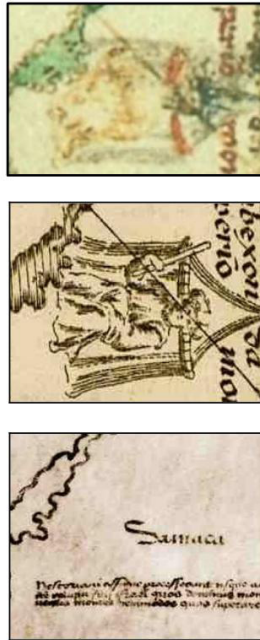


FIGURE 42. THE SEA OF MARMARA, AS DEPICTED ON THE 1436 CIRCULAR WORLD MAP OF ANDREA BIANCO (1436) (TOP), ON THE ENGRAVING OF VINCENZIO FORMALEONI (1782) (CENTRE) AND ON THE VINLAND MAP (BOTTOM)

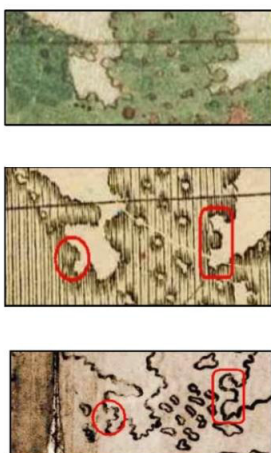


FIGURE 43. THE PELOPONNESE AND A SEGMENT OF THE TURKISH COASTLINE, AS DEPICTED ON THE 1436 CIRCULAR WORLD MAP OF ANDREA BIANCO (1436) (*TOP*), ON THE ENGRAVING OF VINCENZIO FORMALEONI (1782) (*CENTRE*) AND ON THE VINLAND MAP (*BOTTOM*)

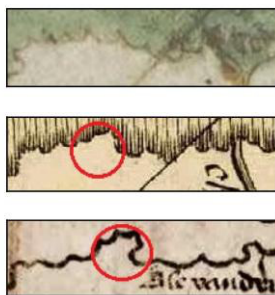


FIGURE 44. THE MEDITERRANEAN COASTLINE WEST OF THE NILE, AS DEPICTED ON THE 1436 CIRCULAR WORLD MAP OF ANDREA BIANCO (1436) (TOP), ON THE ENGRAVING OF VINCENZIO FORMALEONI (1782) (CENTRE) AND ON THE VINLAND MAP (BOTTOM)

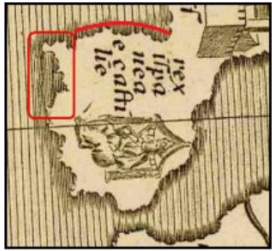


FIGURE 45. THE IBERIAN PENINSULA, AS DEPICTED ON THE 1436 CIRCULAR WORLD MAP OF ANDREA BIANCO (1436) (*TOP*), ON THE ENGRAVING OF VINCENZIO FORMALEONI (1782) (*CENTRE*) AND ON THE VINLAND MAP (*BOTTOM*)

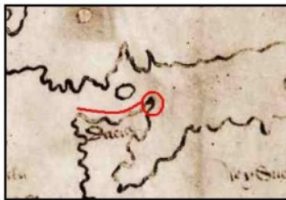
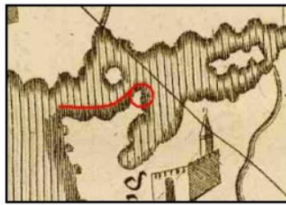


FIGURE 46. THE NORTHERN COAST OF DENMARK, AS DEPICTED ON THE 1436 CIRCULAR WORLD MAP OF ANDREA BIANCO (1436) (TOP), ON THE ENGRAVING OF VINCENZIO FORMALEONI (1782) (CENTRE) AND ON THE VINLAND MAP (BOTTOM)

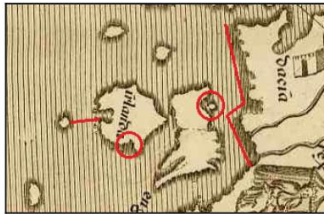


FIGURE 47. IRELAND, BRITAIN AND THE CONTINENTAL COASTLINE, AS DEPICTED ON THE 1436 CIRCULAR WORLD MAP OF ANDREA BIANCO (1436) (TOP), ON THE ENGRAVING OF VINCENZIO FORMALEONI (1782) (CENTRE) AND ON THE VINLAND MAP (BOTTOM)

Chapter Conclusion

It is for the reader to decide whether the visual evidence presented in this chapter conclusively demonstrates that the Vinland Map cannot have been drawn before 1782. My own belief is that it does.

It should be stressed that Formaleoni's objective in making his engraving was to reproduce as accurately as possible the map in St Mark's Library. Any notion that his deviations from Bianco might have been deliberately introduced as a result of having seen the Vinland Map himself can certainly be dismissed. It is not credible to imagine that Formaleoni could have had access to a map displaying such extraordinary features as *Vinilanda insula* and the *Magnum mare Tartarorum* and have used it only for the purpose of making trivial alterations to the coastline of the Black Sea, an inlet in Ireland and so forth. Had he set eyes upon the Vinland Map, he would undoubtedly have grasped its historic importance and seized the opportunity to present it to the world; yet his essay shows not the slightest awareness of its existence (or the existence of any other map, unknown to us, containing these variants).

In truth, Formaleoni had no reason to introduce elements from other sources into his depiction of the Bianco map. He was striving to create, not a hybrid, but a faithful copy of the map held in Venice, as his own words make clear:

I publish it, because I consider it to be a document capable of stimulating many ideas, not only in relation to the state of knowledge and the geographic systems of those times, but also as regards the progress of pictorial representation and design. Accordingly, I have taken every possible care to ensure perfect conformity to the original.²⁴

These considerations aside, the Sea of Marmara images on their own surely demonstrate that Formaleoni's engraving was used in the design of the Vinland Map, not *vice versa*.

The Vinland Map has been the subject of scholarly debate for half a century. Amazingly, in all that time it has never been suggested that a forger might have made use of Formaleoni's eighteenth-century engraving. How are we to account for this collective failure to see the obvious? The principal responsibility for the whole debacle must fall squarely on the shoulders of R.A. Skelton, the cartographical expert who spent years of his life researching the context and features of the Vinland Map. Skelton was familiar with Formaleoni's essay and knew well that the Bianco world map had "often been reproduced."²⁵ In private correspondence he even commented upon the fact that the Formaleoni reproduction was "engraved from a hand copy," noting that the facsimiles of Santarém and Nordenskiöld were themselves hand copies of Formaleoni.²⁶ He therefore had the facts at his disposal which ought to have led him to the

realisation that a forger could have used the engraving as his model: yet he never arrived at this insight.

Skelton's interest in the 1782 engraving was narrowly focused upon the manner in which Formaleoni had depicted the fold on the Bianco world map. It was this feature, too, which Professor L.-A. Vigneras had in mind, when he made the following observation in an article critical of the Vinland Map.

The fold in this map and in the other maps of Bianco's 1436 atlas is apparently due to the reduced format of the binding. . . . It existed when Formaleoni had his facsimile made (about 1780), but it was less pronounced than it is now, as far as we can judge by comparing his facsimile with the reproductions in Peschel and in the *Vinland Map* [i.e. the 1965 Yale book]. Santarem's reproduction . . . is only a copy of Formaleoni's facsimile.²⁷

In the above passage, Vigneras adverts to the distinction between the original Bianco map and the later engraving: he even speaks of comparing the two. Like Skelton before him, however, Vigneras completely failed to consider the possibility that the later facsimile might have served as a source of the Vinland Map's design.

It is as if an underlying intellectual stumbling block has been in place all along: one based, paradoxically, not so much on poor scholarship as on an unimaginative adherence to the norms of conventional research. When Skelton departed for Venice to study the original Bianco atlas, he did so in the belief that he was obeying the axiom to "go to the sources." It is understandable that derivative, imperfect copies like the Formaleoni redrawing should have held little interest for him, when he had the original at his disposal. The notion that a secondary copy might be the true primary source would have run counter to his scholarly mindset, so he gave it no thought.

It may be that an inquest of some kind is called for in relation to the collective failure of the experts to identify the Formaleoni engraving as a source of the Vinland Map. A great deal of time, money and scholarly acrimony has been expended quite unnecessarily, and the psychological reverberations of the unhappy controversy are not yet spent.

elaboration of the Skálholt Map—again with a runic inscription and with Greenland depicted as an island—surfaced in 1976 (István Kovárczy, *A Bél Mátyás Vinland-Térképe*, Eszaki Vártán 37 (Södertälje [Sweden]: Eszaki Vártán, 1976); idem, “Bél Mátyás Vinland-Térképe,” in János Nádas and Ferenc Somogyi, eds., *Proceedings of the XXIst Annual Congress of [the] Hungarian Scientific, Literary and Artistic Association / A XXI. Magyar Találkozó Krónikája* (Cleveland, OH: Árpád Publishing Company, 1982), 128–34)). Neither of the two Hungarian maps makes any pretence to have been drawn before Columbus, which naturally makes them less sensational than the Vinland Map at Yale.

65. R.A. Skelton, “The Vinland Map,” *Journal of the Institute of Navigation* 19 (1966): 273.

66. Skelton et al., *Vinland Map*, 197.

67. As above, note 65.

68. Skelton et al., *Vinland Map*, 195.

69. *ibid.*, xiv–xvi. While Painter’s appeal to the papal documents was perfectly legitimate, his conclusion (“that Greenland was an island was an official and familiar credence, almost a doctrine, of the Roman Church” (*ibid.*, xiv)) was absurdly expressed.

70. *ibid.*, 183.

71. *ibid.*, xv.

72. Koczy, “The Vinland Map,” 134.

73. Taylor, “The Vinland Map,” 201.

74. *ibid.*, 196.

75. *ibid.*, 201. Taylor believed that the results of her comparison suggested a “borrowing and scrambling” from the modern Goode map (see British Library Map Department, Vinland Map Files, Box 3, item no. 21). However, she also felt that the flattened north coast of Greenland might have been inspired by the depiction of this island in a world map drawn on the Aitoff projection, which features in Deetz and Adams, *Elements*, 151 (Fig. 70). (Note that this is an altogether different map from the much larger folding Plate V—also drawn on the Aitoff projection, but having a different central meridian—whose elliptical border is supposed to have served as a framework for the Vinland Map.)

76. Taylor, “The Vinland Map,” 204. The displacement of Crete appears to be a consequence of the mapmaker’s failure to maintain proper register between certain geographical features north of the Mediterranean and the North African coastline. Concordance with Bianco is maintained between the Strait of Gibraltar and Italy, but the Adriatic and Greece are excessively broadened, leading to a compression of the Aegean and necessitating an eastward shifting of Crete (in order not to block the Mediterranean entirely). It is difficult to say whether these and other distortions—such as the northward displacement of the Black Sea—were the result of a careful, conscious design, or rather a haphazard attempt to squash the principal features of Bianco’s circular map into the elongated confines of the double parchment-leaf spread.

NOTES TO CHAPTER THIRTEEN

1. For background on the life and career of Formaleoni, see Mario Infelise, “Un piacentino nella Francia del terrore: V.A. Formaleoni da Venezia a Parigi,” in Carlo Capra, ed., *Giacobini e pubblica opinione nel ducato di Piacenza: Convegno di Studio, Piacenza, Palazzo Farnese, 27–28 settembre 1996* (Piacenza: Tip.Le.Co., 1998), 157–73; idem, “Formaleoni, Vincenzo Antonio” in *Dizionario Biografico degli Italiani*, vol. 49 (Rome: Istituto della Enciclopedia Italiana, 1997), 22–26.

2. Infelise, “Un piacentino,” 163–64.

3. *ibid.*, 164–73.

4. Vincenzo Formaleoni, ed., *Compendio della Storia Generale de Viaggi. Opera di M. De La Harpe Accademico Parigino. Adorna di Carte Geografiche, e Figure arricchita d'Annotazioni*, Tomo Sesto (Venice: Presso Vincenzo Formaleoni, 1782), 193–253. This is the sixth volume of Formaleoni's edition of a 32-volume work by Jean-François de La Harpe, *Abrégé de l'histoire générale des voyages, contenant ce qu'il y a de plus remarquable, de plus utile & de mieux avéré dans les Pays où les Voyageurs ont pénétré; les moeurs des Habitans, la Religion, les Usages, Arts & sciences, Commerce, Manufactures; enrichie de Cartes géographiques & de figures* (Paris: Hôtel de Thou; Laporte; Moutardier, 1780–1801). For Formaleoni's description of the circumstances surrounding his first encounter with the Bianco atlas, see pp. 197–200. The engraving of Bianco's circular world map follows p. 240: it is 25 cm in diameter. (I have made no attempt to preserve the relative scale of the images used to illustrate the present chapter, the aim being only to highlight similarities and discrepancies of design.)

5. Vincenzo Formaleoni, *Saggio sulla nautica antica de' Veneziani. Con una illustrazione d'alcune carte idrografiche antiche della Biblioteca di S. Marco, che dimostrano l'isole Antille prima della scoperta di Cristoforo Colombo* (Venice: Presso l'Autore, 1783). This book comprises two essays: the *Saggio* essay of 1783 (which includes a reproduction of the first sheet of Bianco's atlas), and a slightly extended version of the 1782 essay (with its reproduction of the fifth and ninth charts of Bianco's atlas: the ninth being the circular world map). Formaleoni went on to reprint his 1783 *Saggio* essay separately in vol. 20 of *Compendio della Storia Generale de Viaggi* (the 1782 essay having already featured in vol. 6). A French edition of the 1783 two-essay volume appeared in 1788: Vicenzio [sic] Formaleoni, *Essai sur la marine ancienne des Vénitiens. Dans lequel on a mis au jour plusieurs cartes tirées de la Bibliothèque de St. Marc, antérieures à la découverte de Christophe Colomb, & qui indiquent clairement l'existence des isles Antilles*, trans. le Chevalier d'Henin (Chez Formaleoni, 1788).

6. [Manuel Francisco de Barros e Sousa, Visconde de Santarém], *Atlas composé de mappemondes, de portulans et de cartes hydrographiques et historiques, depuis le VI^e jusqu'au XVII^e siècle, pour la plupart inédites, et tirées de plusieurs bibliothèques de l'Europe, devant servir de preuves à l'histoire de la cosmographie et de la cartographie pendant le Moyen Age et à celle des progrès de la géographie, après les découvertes maritimes et terrestres du XV^e siècle, effectuées par les Portugais, les Espagnols, et par d'autres peuples, recueillies et gravées sous la direction du Vicomte de Santarem* (Paris: E. Thunot et Ce, 1842–53). The Bianco world map reproduction in this work, which bears the title “Mappemonde d'Andrea Bianco, dressée en 1436,” is a nineteenth-century lithograph (specifically, an engraving on stone), the work of a Paris-based engraver named Schwaerzlé. (It is the second figure on Plate 26 in the arrangement of plates adopted by Helen Wallis and A.H. Sijmons, eds., *Atlas de Santarem: Facsimile of the Final Edition, 1849, with explanatory notes* (Amsterdam: Rudolf Muller, 1985)). Although there is no reference to Formaleoni in the caption to the plate, Schwaerzlé's copy is plainly based upon the 1782 engraving.

7. A.E. Nordenskiöld, *Periplus: An Essay on the Early History of Charts and Sailing Directions*, trans. Francis A. Bather (Stockholm: P.A. Norstedt & Söner, 1897), 19, fig. 7: “Map of the world by Andrea Bianco, 1436. From Formaleoni.” The reproduction of the Bianco world map which features in the historical atlas of Joachim Lelewel, *Géographie du Moyen Age: Atlas composé de cinquante planches, gravées par l'auteur* (Bruxelles: Chez Vve et J. Pilliet, Libraires, Successeurs de P.-J. Voglet, 1850) Pl. XXXII.84, is based upon Formaleoni (cf. *ibid.*, xi), but can be excluded as a possible source of the Vinland Map. The rather basic sketch in Konrad Kretschmer, *Die Entdeckung Amerikas in ihrer Bedeutung für die Geschichte des Weltbildes: Atlas* (Berlin, London, Paris: W.H. Köhl, Sampson Low & Co., H. Welter, 1892),

Tafel III, 12, can also be discounted. Wallis and Sijmons, in the Explanatory Notes accompanying their facsimile edition of the *Atlas de Santarém*, refer (63–64) to a reproduction of the Bianco world map in the work of Edme François Jomard, *Les monuments de la géographie, ou, Recueil d'anciennes cartes européennes et orientales* . . . (Paris: Duprat et al., 1842–1862), Pl. XIII no. 9. This is, I think, an error: from what I can find, Bianco's map does not feature in Jomard's collection. An attractive colour reproduction of the Bianco world map, published "per cura del C. Ammiraglio L. Fincati" but unquestionably based upon the Formaleoni engraving, accompanied an article by Pietro Amat di San Filippo, "Planisferio Disegnato nel 1436 dal veneziano Bianco che si conserva nella Marciana di Venezia: Nota Illustrativa del Conte Pietro Amat di San Filippo," *Rivista Marittima* 12, terzo trimestre (1879): 367–80; idem, "Nota illustrativa del planisferio disegnato nel 1436 dal veneziano Andrea Bianco che si conserva nella Marciana in Venezia," *Bollettino della Società geografica italiana* 13 (vol. 16) (serie 2, vol. 4) (1879): 560–70. Presumably for cosmetic reasons, the copy omits the disfiguring fold-mark defects which appear in the Formaleoni engraving (defects that are faithfully preserved in the Santarém and Nordenskiöld reproductions).

8. *Der Atlas des Andrea Bianco vom Jahre 1436, in zehn Tafeln. Photographische Facsimile in der Grösse des Originals, vollständig herausgegeben von Max Münster und mit einem Vorworte versehen von Oscar Peschel* (Venice: H. F. und M. Münster, 1869). The fifteen-page preface by Oscar Peschel was translated into Italian for a re-issue of the work in 1871: *L'Atlante di Andrea Bianco dell'anno 1436 in dieci tavole. Fac-simile fotografico nella grandezza dell'originale che si conserva nella biblioteca Marciana con Illustrazione di Oscarre Peschel* (Venice: Ferdinando Ongania e C., successori H.F. e M. Münster, 1871).

9. For a mid-twentieth century reproduction of the Formaleoni engraving, taken directly (with acknowledgement) from Santarém, see Lloyd A. Brown, *The Story of Maps* (Boston: Little, Brown and Company, 1949); a British edition appeared a couple of years later (London: Cresset Press, 1951). A book by Frank G. Slaughter features the Formaleoni engraving on its endpapers: *The Mapmaker: A Novel of the Days of Prince Henry, the Navigator* (Garden City, NY: Doubleday & Company, 1957). (Coincidentally enough, this work—which weaves a fictional tale around the character of Andrea Bianco—appeared in 1957; but it hit the shelves too late in the year for it to have inspired the Vinland Map's design.) For a more recent example of the Formaleoni image in use, see Jean Delumeau, *History of Paradise: The Garden of Eden in Myth and Tradition*, trans. Matthew O'Connell (New York: Continuum, 1995).

10. "Generally speaking, most of the facsimiles of early maps made before c. 1880 should be considered as of doubtful fidelity to the originals. This does not, of course, apply to photographs": C. Koeman, "An Increase in Facsimile Reprints," *Imago Mundi* 18 (1964): 87.

11. Skelton et al., *Vinland Map*, 122–23; 138 (Legend 63). I agree with J. Huston McCulloch that there is no inconsistency regarding the manner in which the -æ ending is written in this legend (contrary to concerns of F. Donald Logan reported by Seaver, *Maps*, 173). See McCulloch, "Some Finer Points" website.

12. The island chain north of the Madeira group in Bianco's 1436 circular world map follows a traditional layout already found in charts of the previous century (cf. the useful figure and table in Cortesão, *History*, vol. 2, 56–59 (fig. 70 and Table I)). For the purpose of the present study there is no need to enter into the question of whether the presence of these islands on fourteenth-century charts demonstrates a knowledge of the Azores prior to their formal, documented discovery by the Portuguese in 1427. If the islands are indeed meant to depict the actual Azores—as their grouping would suggest—then they are positioned too far west, and given an erroneous orientation. For that reason some have held them to be "false Azores": imaginary islands whose names were eventually transferred to the real Azores on

their discovery. (A well-known later chart by Bianco (1448) shows the Azores in their true position, but at the same time retains the traditional island chain as depicted in his 1436 atlas.) For opposing views on the matter, see Richard Hennig, “Waren die Azoren vor 1432 bekannt? Zum fünfhundert jährigen Jubiläum ihrer Entdeckung,” *Dr. A. Petermanns Mitteilungen aus Justus Perthes Geographischer Anstalt* 78 (1932): 180–84; Konrad Kretschmer, “Die Azoren im Kartenbild des Mittelalters,” *ibid.*, 81 (1935): 52–54; Richard Hennig, “Die Frage der Azoren-Kenntnis im 14. Jahrhundert,” *ibid.*, 192. Hennig returned to the topic in his *Terrae Incognitae*, vol. 3, 291–308; vol. 4, 67–80.

13. In 1966 R.A. Skelton, who had not succeeded in coming up with a plausible explanation for the *Desiderate insule* nomenclature in terms of known charts, congratulated G.R. Crone for having identified a “convincing parallel” in the form of the label *Insule deserte*, corresponding to the present-day Desertas, which appears on some maps of the period (G.R. Crone, “How Authentic Is the Vinland Map?” (review), *Encounter* (February 1966): 77; R.A. Skelton, “Interpreting the Vinland Map” (letter to the Editor), *Encounter* (April 1966): 92). Crone, in response, testily disclaimed having found a “parallel”: he had shown, rather, “how another name had been manufactured” (*ibid.*, 93). It is not certain, however, that a misreading (either purposeful or accidental) of *Insule deserte* (“the deserted islands”) underlies the naming of *Desiderate insule* (“the desired islands”). L.-A. Vigneras observed that Columbus gave the name *Deseada* to an island east of Guadeloupe, which made its first cartographical appearance in the “Cantino” map of 1502 (Vigneras, “Greenland,” 77). Another potential source of inspiration for the mapmaker may be added: the phrase “desiderata insula” appears in the medieval *Navigatio sancti Brendani*, the Latin version of Saint Brendan’s fabled journeys: cf. Charles de Smedt and Joseph de Backer, eds., *Acta sanctorum Hiberniae: ex Codice Salmanticensi, nunc primum integre edita* (Edinburgi et Londini: Gul. Blackwood et filios; Brugis et Insulis: Desclée, De Brouwer et socios, 1888), cols. 114, 766.

14. Skelton at al., *Vinland Map*, 122.

15. The islands are, however depicted correctly in Formaleoni’s reproduction of the fourth chart from Bianco’s atlas, which also forms part of his essay. This chart provides a close-up view of the Atlantic islands, Spain and a segment of the north-west African coast.

16. Skelton at al., *Vinland Map*, 155–57. The “Laurentian sea-atlas (1351)” is the so-called Medici Atlas (Florence, Biblioteca Medicea Laurenziana, Gaddi 9). It should be noted that later datings, reaching into the early fifteenth century, have since been proposed for this atlas. This does not, however, affect the general point, which is that the Madeira group has consistently been depicted in the form of multiple islands since its first appearance in fourteenth-century cartography. The depiction of the Madeira group in the Catalan Atlas of c. 1375 (Paris, Bibliothèque National de France, MS. Esp. 30), for example, is barely distinguishable from the later depiction of Andrea Bianco, with its macaroni-shaped island of Madeira, Porto Santo drawn as a crescent, and several islets making up the Desertas.

17. Taylor, “The Vinland Map,” 204; also Robert S. Lopez in Washburn, ed., *Proceedings*, 32 n. 2. E.G.R. Taylor’s reference to the “absence” of the Sea of Marmara prompted R.A. Skelton to reply that the sea “is not omitted, but is clearly drawn in a form recognizably generalized from that seen in Bianco’s world map” (Skelton, “The Vinland Map,” 173): a response which, while true in itself, avoids addressing the strangeness of the depiction.

18. In his circular world map, Bianco made frequent use of decorative icons of seated monarchs, accompanied by such legends as *Rex francorum* (King of the Franks) and *imperion tartaroron* (Empire of the Tartars). The Vinland Map omits all of Bianco’s icons, yet retains the designation *Rex...* (King of...) in several places, even substituting *Rex Noruicorum* (King of Norway) and *Rex Suedorum* (King of Sweden) for Bianco’s *noruega* (Norway) and *sueda* (Sweden). *Rex* in Latin means the king as an individual, not a kingdom, so this

substitution is highly peculiar. On Bianco's world map, *Rex...* refers to the person represented by the icon. Bianco did not write "King of Norway" or "King of Sweden," for the simple reason that there are no decorative icons on his map depicting these monarchs. In the Vinland Map, however, Bianco's *Rex...* formulation is made to serve as a descriptive label of the countries themselves. Cf. R.A. Skelton's brief, embarrassed treatment of the point in Skelton et al., *Vinland Map*, III: "That his original was a map containing (in the manner of medieval cartography) drawings of monarchs with pavilions, cities or standards is suggested by the frequent indication of kingdoms as *Rex...* or *Imperium...*"

19. Bradbury, *Vinland Map* (revised online ed.), 5.

20. Skelton et al., *Vinland Map*, II5.

21. Cf. Bradbury, *Vinland Map* (2004 ed.), 10.

22. Skelton et al., *Vinland Map*, 164.

23. It is a pity to see that the Bianco map has evidently undergone damage in this area since the image used in Figure 47 was taken (the damage is already apparent in the 1993 reproduction of Falchetta, *Atlante Nautico 1436*). The continental portion of Figure 47, including the coastline, is now partially obscured under an unsightly blotch.

24. "Io la pubblico, perchè la considero, come un documento capace di risvegliare molte idee, non solo sullo stato delle cognizioni, e de' sistemi geografici di que' tempi; ma ancora de' progressi della pittura, e del disegno. Perciò vi ho posta tutta l'attenzione possibile, acciò riesca perfettamente conforme all'originale" (Formaleoni, "Antiche scoperte," in *Compendio . . . Tomo Sesto*, 216).

25. Skelton et al., *Vinland Map*, 124 n. 58.

26. R.A. Skelton to A.D. Baxter, April 14, 1966, British Library Map Department, Vinland Map Files, Box 1, item 3(v).

27. Vigneras, "Greenland," 75 n. 56. The fold in the original appears in the Formaleoni engraving as an irregular line of blotches and specks. It may be that the forger, aware of these markings on the engraving but uncertain as to their significance, opted to evade the difficulty by omitting the area altogether: hence the abrupt cut-off of the southern coast of Africa at a point slightly above the fold-line. But there is no certainty to be had on this point.

NOTES TO CHAPTER FOURTEEN

1. Mystic Seaport Museum (Mystic, Connecticut) press release dated May 10, 2018, available at <https://www.mysticseaport.org/press-release/2018/50-years-after-the-firestorm-new-exhibition-reexamines-the-vinland-map-controversy/>.

2. For background on Eric Paul, whose musicological investigations in Venice led to the discovery of Vivaldi's baptismal certificate (thereby settling the controverted question of the composer's date of birth), see Aloys Greither, *Geigen und andere Streichinstrumente des 18. Jahrhunderts aus Venedig* (Hanau: Werner Dausien, [1987]), 68–69; Fergus Fleming, *Amaryllis Fleming* (London: Sinclair-Stevenson, 1993), 186–226 *passim*.

3. British Library Map Department. Vinland Map files, Box 3 (Latest Correspondence), pp. 73, 73(i)–(ix) (various dates, mostly 2014–2015). The papers were deposited by Peter Barber shortly before his retirement as Head of Map Collections at the library. The communication from Melvin Harris to Simon Welfare dated May 24, 2003 is document 73(i).

4. See the online obituary of Melvin Harris at: <https://www.casebook.org/authors/obituaries/mharris.html/>.

5. For recollections of Edwin C. ("Puff") Kersley, see Geoffrey Keynes, *The Gates of Memory* (Oxford: Clarendon Press, 1981), 296–98; M.A.E., "Mr E.C. Kersley," *Times*

END OF SAMPLE